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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,072	03/25/2004	Steven Joel Bullied	EH-11132	6990
30188	7590	05/25/2005	EXAMINER	
PRATT & WHITNEY 400 MAIN STREET MAIL STOP: 132-13 EAST HARTFORD, CT 06108			LIN, KUANG Y	
			ART UNIT	PAPER NUMBER
			1725	

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/809,072

Applicant(s)

BULLIED ET AL.

Examiner

Kuang Y. Lin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/25/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

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1. The drawing is objected to in that the claimed features of claims 13, 14, 31 and 32 are not shown. Correction is required. Applicant is cautious not to introduce new matter during an amendment.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 13, 14, 31 and 32 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

There is no disclosure in the specification as what kind of structural arrangement is adapted for casting two single crystal casting components from a single crystal seed.

4. Claims 13, 14, 21, 31 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not clear what kind of structure arrangement for claims 13, 14, 31 and 32. In claim 21, "3600<sup>0</sup>" shall be "360<sup>0</sup>".

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 15, 25, 29, 30 and are 34 rejected under 35 U.S.C. 102(a) as being clearly anticipated by applicant's admitted prior art as set forth in page 2 of the specification.

7. Claims 1-3, 15-17, 24-26, 29, 30, 34 and 35 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by either Monte et al. (US 5,062,468 or 5,062,469) or Jeyarajan et al. (US 4,940,073).

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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10. Claims 3-14, 16-24, 26-28, 31-33 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art as set forth in page 2 of the specification.

It would have been obvious to obtain the optimal structural parameters through routine experimentation. It is known to cast a plurality of components through a single crystal seed (see, for example, US 5,916,384 to Das and US 5,899,257 to Alleweireldt et al.)

11. Claims 4-14, 18-23, 27, 28 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Monte et al. (US 5,062,468 or 5,062,469) or Jeyarajan et al. (US 4,940,073).

It would have been obvious to obtain the optimal structural parameters through routine experimentation. It is known to cast a plurality of components through a single crystal seed (see, for example, US 5,916,384 to Das and US 5,899,257 to Alleweireldt et al.)

12. Claims 1-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,180,119 to Burd et al. and further in view of either applicant's admitted prior art as set forth in page 2 of the specification, Monte et al. (US 5,062,468 or 5,062,469) or Jeyarajan et al. (US 4,940,073).

Burd et al. substantially show the invention as claimed except that they do not provide a single seed crystal for growing single crystal article. However, each of the secondary references teaches to use both a single crystal seed and a non-liner tubular grain selector in an investment mold to ensure that a predetermined

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crystal structure is obtained in the final cast component. It would have been obvious to further provide the system of Burd et al. with a single crystal seed in the starter cavity for growing single crystal components in view of the secondary references. It would have been obvious to obtain the optimal structural parameters through routine experimentation. It is known to cast a plurality of components through a single crystal seed (see, for example, US 5,916,384 to Das and US 5,899,257 to Alleweireldt et al.)

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuang Y. Lin whose telephone number is 571-272-1179. The examiner can normally be reached on Monday-Friday, 10:00-6:30,.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas X. Dunn can be reached on 571-272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

5/19/05



Kuang Y. Lin  
Primary Examiner  
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